

Serial No. 09/810,474

ASA-991

REMARKS

The Applicants request reconsideration of the rejection.

Claims 2-11 and 16-25 are now pending.

The Examiner rejected claim 11 as being of improper dependent form, citing, "Al is atomic number 13." Reviewing claim 11, the Applicants do not find a limitation corresponding to the alleged problem noted by the Examiner. Rather, claim 11 further limits claim 2, which (as originally filed) requires two layer containing 60 atomic % or more of metal, wherein one of the two layers has at least one metal element having an atomic number of not less than 22 and not more than 47 (i.e., between 22 and 47 inclusive), and a film thickness of 30 nm or more; claim 11 requires the layer having the metal element with an atomic number between 22 and 47 to have a film thickness of not less than 50 nm and not more than 150 nm (i.e., between 50 nm and 150 nm inclusive). Because claim 2 requires the film thickness to be at least 30 nm, claim 11 is more limiting by requiring the thickness to be between 50 nm and 150 nm, a range that is greater than 30 nm.

Reviewing the rest of the claims, The Applicants find that claim 9 requires a layer having at least one metal element having an atomic number of not less than 22 and not more than 47 (i.e., between 22 and 47 inclusive) and containing 70 atomic % or more of Al or Ag. Aluminum (Al) indeed has an atomic number of 13, which is not between 22 and

Serial No. 09/810,474

ASA-991

47, but the claim does not exclude aluminum in addition to the metal element having an atomic number between 22 and 47.

Therefore, the Applicants believe that claim 9 fully satisfies Rule 75(c).

The claims are variously rejected under 35 U.S.C. 102(b), 102(e), and 103(a) as being unpatentable over one or more of the following references:

JP 05-325261

JP 05-159360

EP 0359114

U.S. Patent No. 6,159,573

U.S. Patent No. 6,300,039

U.S. Patent No. 6,177,166

U.S. Patent No. 5,368,986

U.S. Patent No. 4,670,332

U.S. Patent No. 6,132,932

The Applicants traverse each of these rejections, noting the following features of the invention that are not found in the prior art, whether taken individually or in combination:

The present invention is directed to an information storage medium having a substrate and, stacked on the substrate in the following order, a protective layer, a first interfacial layer that includes an oxide or a nitride, a recording layer, and at least two layers each containing 60 atomic % or more of metal, wherein one of the two layers

Serial No. 09/810,474

ASA-991

containing 60 atomic % or more of metal contains at least one metal element having an atomic number of not less than 22 and not more than 47, and a film thickness of 30 nm or more. Because the substrate surface temperature rises during film formation and then is cooled, the layer attached to the substrate expands and then contracts, undergoing a compression stress. See page 4, lines 3-11 of the specification. The claimed layer containing at least one metal element having an atomic number of not less than 22 and not more than 47 works as a stress compensation layer, and the warp of the substrate does not change substantially before and after film formation. See page 108, line 18 through page 109, line 2 of the specification, for example.

However, a stress is still exerted on an interfacial part of the recording film. Therefore, the Applicants provide an interfacial layer which includes an oxide or a nitride for good adhesiveness to other layers. See the specification at page 70, lines 17-20 for example.

The applied prior art teaches a variety of layers having different elements and thicknesses. However, none of the cited documents teaches the claimed interfacial layer. As a result, the Applicants believe that no rejection under 35 U.S.C. 102 is warranted. Further, because of the advantages obtained by using the claimed interfacial layer, the Applicants submit that the claimed invention is patentably

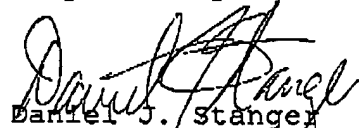
Serial No. 09/810,474

ASA-991

nonobvious over the documents of record, whether taken individually or in any combination.

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

Respectfully submitted,



Daniel J. Stanger
Registration No. 32,846
Attorney for Applicant(s)

MATTINGLY, STANGER & MALUR, P.C.
1800 Diagonal Road, Suite 370
Alexandria, Virginia 22314
Telephone: (703) 684-1120
Facsimile: (703) 684-1157
Date: July 2, 2003